AMENDMENTS TO THE CLAIMS

Claim 58 is added. A complete listing of the claims, including their current status, is provided below.

1-30. **(Cancelled)**

31. **(Previously presented)** A process for preparing a solid support, comprising:

(a) providing a solid support comprising a surface coating having a surface reactive hydroxyl, carboxyl, amino or thiol group;

(b) contacting the surface reactive hydroxyl, carboxyl, amino or thiol group with a plurality of monomers;

(c) polymerizing said monomers to produce a solid support having a surface tethered polymer covalently linked to said surface coating, said surface tethered polymer having at least one adsorbing moiety for adsorbing a biomolecule; and

(d) linking a biomolecule to said polymer via said adsorbing moiety.

32. **(Cancelled)**

33. **(Previously presented)** The process of claim 31, wherein a portion of said biomolecule is a linking moiety.

34. **(Original)** The process of claim 31, wherein said polymer is substantially linear.

35. **(Previously presented)** A process for preparing a solid support capable of adsorbing a biomolecule, comprising:

(a) providing a solid support comprising a surface coating having a surface reactive hydroxyl, carboxyl, amino or thiol group;

(b) contacting the surface reactive hydroxyl, carboxyl, amino or thiol group with a plurality of monomers; and

(c) polymerizing said monomers to produce a solid support having a surface tethered polymer covalently linked to said surface coating, said surface tethered polymer having at least one adsorbing moiety for adsorbing a biomolecule,

wherein said polymer is a vinyl polymer.

36. **(Previously Presented)** The process of claim 31, wherein said adsorbing moiety is an amine group.

37. **(Original)** The process of claim 35, wherein said vinyl polymer is a poly-(vinylamine).

38. **(Original)** The process of claim 31, wherein said biomolecule comprises an oligonucleotide or polynucleotide.

39. **(Previously Presented)** The process of claim 31, further comprising polymerizing an additional non-nucleotidic polymer tethered to said surface coating, said non-nucleotidic polymer comprising additional adsorbing moieties for adsorbing additional biomolecules.

40. **(Previously Presented)** A process for preparing a solid support containing a probe biomolecule capable of hybridization to a target species, comprising:

(a) providing a solid support comprising a surface coating having surface reactive hydroxyl, carboxyl, amino or thiol group,

(b) contacting the surface reactive hydroxyl, carboxyl, amino or thiol group with a plurality of monomers; and

(c) polymerizing said monomers to produce a solid support having a surface tethered polymer covalently linked to said surface coating, said surface tethered polymer having adsorbing sites for adsorbing biomolecules, wherein said surface tethered polymer is capable of assuming a plurality of conformations and exhibits sufficient mobility and flexibility such that the number of biomolecules adsorbed by the adsorbing moieties is maximized; and

(d) contacting the surface tethered polymer with the probe biomolecule.

41. **(Cancelled)**

42. **(Previously Presented)** The process of claim 40, wherein a portion of said biomolecule is a linking moiety.

43. **(Previously Presented)** The process of claim 40, wherein said polymer is substantially linear.

44. **(Original)** The process of claim 40, wherein said polymer is a vinyl polymer.

45. **(Original)** The process of claim 40, wherein said adsorbing moieties are amine groups.

46. **(Original)** The process of claim 42, wherein said vinyl polymer is a poly-(vinylamine).

47. **(Previously Presented)** The process of claim 40, wherein said biomolecule comprises an oligonucleotide or polynucleotide.

48. **(Previously Presented)** The process of claim 40, further comprising polymerizing a non-nucleotidic polymer tethered to said surface coating, said non-nucleotidic polymer comprising additional adsorbing moieties adapted to adsorb an additional biomolecule.

49. **(Previously Presented)** A process for preparing a solid support capable of adsorbing a biomolecule, comprising:

(a) providing a solid support comprising a surface coating having a surface reactive surface reactive hydroxyl, carboxyl, amino or thiol group;

(b) contacting the surface reactive hydroxyl, carboxyl, amino or thiol group with vinyl monomers; and,

(c) polymerizing said monomers to produce a solid support having a surface tethered vinyl polymer covalently linked to said surface coating, said surface tethered vinyl polymer having at least one adsorbing moiety for adsorbing a biomolecule.

50. **(Cancelled)**

51. **(Previously Presented)** The process of claim 49, wherein said polymerization is done in the presence of cerium.

52. **(Previously Presented)** The process of claim 49, wherein said vinyl polymer is a poly-(vinylamine).

53. **(Previously Presented)** A method for preparing a solid support, comprising:

(a) contacting a plurality of vinyl monomers with a reactive hydroxyl, carboxyl, amino or thiol group present on the surface of a solid support; and

(b) polymerizing said vinyl monomers to produce a solid support having a vinyl polymer covalently linked to said solid support.

54. **(Previously Presented)** The method of claim 53, further comprising linking a biomolecule to said vinyl polymer.

55. **(Previously Presented)** The method of claim 54, wherein said biomolecule is a polypeptide or polynucleotide.

56. **(Previously Presented)** A method for preparing a solid support, comprising:

(a) contacting a plurality of monomers with a reactive hydroxyl, carboxyl, amino or thiol group present on the surface of a solid support;

(b) polymerizing said monomers to produce a solid support-bound polymer comprising a reactive group; and

(c) linking a biomolecule to said polymer via said reactive group.

57. **(Previously Presented)** The method of claim 56, wherein said biomolecule is a polypeptide or polynucleotide.

58. **(New)** The method of claim 31, wherein at least one of said monomers reacts with said surface reactive hydroxyl, carboxyl, amino or thiol group to covalently bond said polymer to said surface coating.